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**An Improved Method for Measuring Filler Dispersion of Uncured Rubber.**

*Abstract*

Filler dispersion is a critical component in determining material properties of a vulcanized rubber compound. Various methods exist to determine the degree of dispersion including mechanical, electrical and optical techniques. These methods vary both in complexity and time required for testing. An automated reflected light optical method of rating dispersion has been shown to be accurate and operator independent. Most often, however, this method is applied to the cured rubber product. A new method of sample preparation is described which allows specimens to be made from unvulcanized rubber that are suitable for dispersion measurement. The experiment shows a good correlation of the dispersion rating by this method to the work input of the mix, the Mooney viscosity and Mooney stress relaxation and the dispersion rating of the vulcanizate. With this correlation, then, the method allows the test to be applied to quality control of uncured rubber in general and to the masterbatch in particular.

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